

# Comparisons of Job Characteristics

**Focus Occupation: Biological Technicians (19-4021)**

**Associated Occupation: Animal Scientists (19-1011)**

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|    |  |
|----|--|
| << | Focus occupation element is much lower             |
| <  | Focus occupation element is lower                  |
| 0  | Focus occupation element is at a similar level     |
| >  | Focus occupation element is at a higher level      |
| >> | Focus occupation element is at a much higher level |

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 80

**Focus Occupation: Biological Technicians (19-4021)**

**Associated Occupation: Animal Scientists (19-1011)**

| Associated Occupation's Key Knowledge Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation |   |
|--|---------------------------------|--------------------------------|---------------------------|--------------------------------|---|
| Biology  | 3.7                             | 21.1                           | 18.9                      | <                              | Expanded education and/or training may be required  |
| English Language                               | 11.2                            | 17.2                           | 10.5                      | <<                             | Extensive education and/or training may be required |
| Food Production                                | 2.1                             | 17.2                           | 2.5                       | <<                             | Extensive education and/or training may be required |
| Mathematics                                    | 9.2                             | 15.7                           | 11.3                      | <<                             | Extensive education and/or training may be required |
| Chemistry                                      | 4.8                             | 14.9                           | 13.5                      | <                              | Expanded education and/or training may be required  |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 85

**Focus Occupation: Biological Technicians (19-4021)**

**Associated Occupation: Animal Scientists (19-1011)**

| Associated Occupation's Key Skills Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation |  |
|---|---------------------------------|--------------------------------|---------------------------|--------------------------------|--|
| Reading Comprehension                       | 10.7                            | 15.4                           | 14.1                      | 0                              | Current skill level may be sufficient                        |
| Science                                     | 4.5                             | 15.1                           | 11.2                      | <<                             | Extensive development of skills in this area may be required |
| Writing                                     | 9.2                             | 14.6                           | 10.1                      | <<                             | Extensive development of skills in this area may be required |
| Judgment and Decision Making                | 9.4                             | 13.3                           | 10.1                      | <<                             | Extensive development of skills in this area may be required |
| Complex Problem Solving                     | 9.1                             | 13.2                           | 10.5                      | <                              | A higher skill level may be required                         |

|                    |     |      |     |    |  |
|--------------------|-----|------|-----|----|--|
| Systems Evaluation | 6.4 | 10.7 | 7.2 | << | Extensive development of skills in this area may be required |
| Systems Analysis   | 6.5 | 10.6 | 8.3 | <  | A higher skill level may be required                         |
| Mathematics        | 6.2 | 9.8  | 9.4 | 0  | Current skill level may be sufficient                        |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

| Abilities  |                                 | Similarity of Focus Occupation to Associated Occupation: 89 |                           |                                |  |
|--|---------------------------------|---|---------------------------|--------------------------------|--|
| Focus Occupation: Biological Technicians (19-4021)<br>Associated Occupation: Animal Scientists (19-1011) |                                 |   |                           |                                |  |
| Associated Occupation's Key Abilities Elements   | Average Rating, All Occupations | Associated Occupation's Rating                              | Focus Occupation's Rating | Evaluation of Focus Occupation |  |
| Written Comprehension  | 11.0                            | 16.5  | 11.8                      | <<                             | Extensive improvement in abilities may be required |
| Oral Comprehension   | 12.5                            | 16.4  | 12.5                      | <<                             | Extensive improvement in abilities may be required |
| Oral Expression  | 12.4                            | 16.0  | 11.1                      | <<                             | Extensive improvement in abilities may be required |
| Inductive Reasoning  | 10.2                            | 14.9  | 12.6                      | <                              | Some improvement in abilities may be required      |
| Written Expression   | 9.8                             | 14.5  | 11.6                      | <                              | Some improvement in abilities may be required      |
| Deductive Reasoning  | 10.6                            | 14.2  | 11.7                      | <                              | Some improvement in abilities may be required      |
| Problem Sensitivity  | 11.1                            | 13.6  | 11.3                      | <                              | Some improvement in abilities may be required      |
| Near Vision  | 11.1                            | 12.6  | 13.9                      | >                              | Current ability level is likely sufficient         |
| Information Ordering   | 9.9                             | 12.3  | 12.3                      | 0                              | Current ability level may be sufficient            |
| Category Flexibility   | 9.0                             | 11.8  | 11.5                      | 0                              | Current ability level may be sufficient            |
| Fluency of Ideas   | 7.6                             | 11.1  | 9.7                       | <                              | Some improvement in abilities may be required      |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

| Activities that Both Occupations Have in Common  |                         | Similarity of Focus Occupation to Associated Occupation: 90 |
|--|-------------------------|---|
| Focus Occupation: Biological Technicians (19-4021)<br>Associated Occupation: Animal Scientists (19-1011) |                         |   |
| Work Activities  | Exclusivity of Activity |   |
| Adhere to safety procedures  | 12                      |   |
| Analyze biological research, test, or analysis data  | 70                      |   |
| Analyze scientific research data or investigative findings   | 27                      |   |
| Collect scientific or technical data   | 30                      |   |
| Collect statistical data   | 47                      |   |

|   |    |
|---|----|
| Communicate technical information                                       | 4  |
| Conduct analyses or tests of organic compounds                          | 71 |
| Conduct field research or investigative studies                         | 52 |
| Conduct laboratory research or experiments                              | 57 |
| Conduct standardized qualitative laboratory analyses                    | 62 |
| Conduct standardized quantitative laboratory analyses                   | 62 |
| Develop or maintain databases   | 30 |
| Develop tables depicting data   | 33 |
| Examine biological or other material specimens under microscope         | 73 |
| Explain complex mathematical information                                | 30 |
| Follow infectious materials procedures                                  | 52 |
| Follow microbiology procedures  | 74 |
| Identify animal species   | 82 |
| Perform statistical analysis  | 71 |
| Prepare reports   | 8  |
| Prepare technical reports or related documentation                      | 22 |
| Recognize disease or parasites in animals                               | 72 |
| Record test results, test procedures, or inspection data                | 48 |
| Research human or animal disease  | 77 |
| Use biological research techniques                                      | 68 |
| Use biological testing instruments                                      | 73 |
| Use chemical testing or analysis procedures                             | 54 |
| Use computers to enter, access or retrieve data                         | 3  |
| Use knowledge of investigation techniques                               | 16 |
| Use knowledge of vivisection  | 87 |
| Use laboratory equipment  | 60 |
| Use mathematical or statistical methods to identify or analyze problems | 30 |
| Use microscope  | 71 |
| Use nutrition research techniques                                       | 81 |
| Use quantitative research methods                                       | 35 |
| Use relational database software  | 26 |
| Use scientific research methodology                                     | 21 |
| Use spreadsheet software  | 18 |
| Use word processing or desktop publishing software                      | 17 |

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 78

**Focus Occupation: Biological Technicians (19-4021)**  
**Associated Occupation: Animal Scientists (19-1011)**

| Tools and Technologies                             | Exclusivity |
|--|-------------|
| Autoclave and sterilizer equipment and accessories | 12          |
| Business function specific software                | 1           |

|  |    |
|--|----|
| Chemical evaluation instruments and supplies                               | 10 |
| Chromatographic measuring instruments and accessories                      | 16 |
| Clinical and diagnostic analyzers and accessories and supplies             | 18 |
| Computers  | 1  |
| Content authoring and editing software                                     | 1  |
| Data management and query software   | 1  |
| Electrochemical measuring instruments and accessories                      | 9  |
| General laboratory glassware and plasticware and supplies                  | 13 |
| Histology equipment  | 35 |
| Indicating and recording instruments                                       | 2  |
| Industry specific software   | 1  |
| Information exchange software  | 1  |
| Laboratory baths   | 24 |
| Laboratory blending and dispersing and homogenizing equipment and supplies | 27 |
| Laboratory centrifuges and accessories                                     | 13 |
| Laboratory electrophoresis and blotting system and supplies                | 26 |
| Laboratory enclosures and accessories                                      | 17 |
| Laboratory heating and drying equipment                                    | 13 |
| Laboratory incubating equipment  | 20 |
| Laboratory ovens and accessories   | 15 |
| Pipettes and liquid handling equipment and supplies                        | 16 |
| Spectroscopic equipment  | 10 |
| Tissue culture and high throughput screening supplies                      | 31 |
| Viewing and observing instruments and accessories                          | 4  |
| Weight measuring instruments   | 7  |

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.